

COVID 19 Spike RBD Coronavirus Active Protein | COVID-19 active protein

Recombinant SARS-CoV-2 Spike RBD Protein (C-His Tag)(Omicron)

CATALOG #
AAA177997

HOST
HEK293 Cells

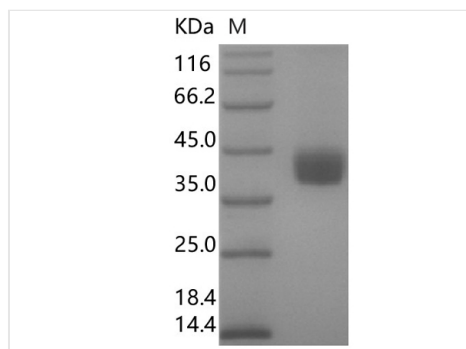
PRODUCT SYNONYMS

COVID 19 Spike RBD Coronavirus; Recombinant SARS-CoV-2 Spike RBD Protein (C-His Tag)(Omicron); 2019 Novel Coronavirus; Coronavirus; CoV; COVID-19 virus; HCoV-2; Human Coronavirus 2019; SARS2; SARS-CoV-2; Severe acute respiratory syndrome coronavirus 2; Spike RBD; S protein RBD; 2019-nCoV S protein RBD; SARS-CoV-2 Spike RBD; Omicron Spike RBD; COVID-19 active protein

PRODUCT SPECIFICATIONS

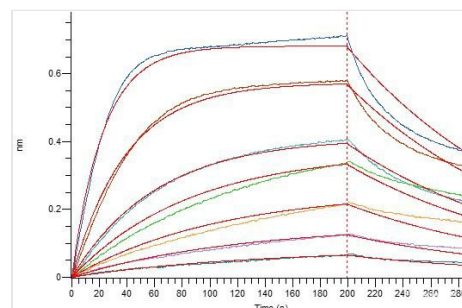
Host	HEK293 Cells
Purity/Purification	>95% as determined by SDS-PAGE.
Form/Format	Supplied as a 0.2 um filtered solution of PBS, pH 7.4
Sequence	Arg319-Phe 541(G339D, S371L,S373 P,S375F,K4 17N,N440K, G446S,S477 N,T478K,E4 84A,Q493R, G496S,Q498 R,N501Y,Y5 05H)
Tag	C-His
Species	SARS-CoV-2
Endotoxin	< 1.0 EU per ug protein as determined by the LAL method.
Protein Construction	Recombinant SARS-CoV-2 S protein RBD Protein is produced by our Mammalian expression system and the target gene encoding Arg319-Phe541 (G339D, S371L, S373P, S375F, K417N, N440K, G446S, S477N, T478K, E484A, Q493R, G496S, Q498R, N501Y, Y505H) is expressed with a 6His tag at the C-terminus.
Activity	1. Loaded Human ACE2-Fc on Protein A Biosensor, can bind SARS-CoV-2 S RBD (Omicron,B.1.1.529) with an affinity constant of 6.32 nM as determined in BLI assay. 2. Loaded Anti-SARS-CoV-2 S1 mAb-Fc on Protein A Biosensor, can bind SARS-CoV-2 S RBD (Omicron,B.1.1.529) with an affinity constant of 19.5 nM as determined in BLI assay.
Preparation and Storage	Store at < -20 degree C, stable for 6 months. Please minimize freeze-thaw cycles.

IMAGES



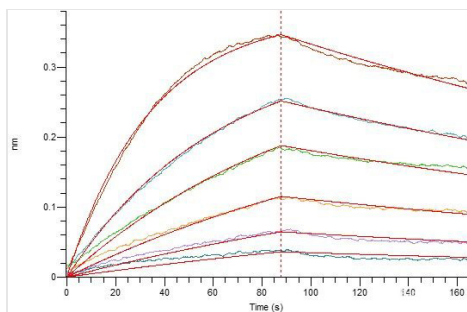
SDS-PAGE

Recombinant SARS-CoV-2 Spike RBD Protein (C-His Tag)(Omicron)



Bioactivity

Loaded Anti-SARS-CoV-2 S1 mAb-Fc on Protein A Biosensor, can bind SARS-CoV-2 S RBD (Omicron?B.1.1.529) with an affinity constant of 19.5 nM as determined in BLI assay.



Activity

Loaded Human ACE2-Fc on Protein A Biosensor, can bind SARS-CoV-2 S RBD (Omicron?B.1.1.529) with an affinity constant of 6.32 nM as determined in BLI assay.

ADDITIONAL INFORMATION

Related Product Information for COVID-19 active protein

The spike (S) glycoprotein of coronaviruses contains protrusions that will only bind to certain receptors on the host cell. Known receptors bind S1 are ACE2, angiotensin-converting enzyme 2; DPP4, dipeptidyl peptidase-4; APN, aminopeptidase N; CEACAM, carcinoembryonic antigen-related cell adhesion molecule 1; Sia, sialic acid; O-ac Sia, O-acetylated sialic acid. The spike is essential for both host specificity and viral infectivity. The term 'peplomer' is typically used to refer to a grouping of heterologous proteins on the virus surface that function together. The spike (S) glycoprotein of coronaviruses is known to be essential in the binding of the virus to the host cell at the advent of the infection process. It's been reported that SARS-CoV-2 (COVID-19 coronavirus, 2019-nCoV) can infect the human respiratory epithelial cells through interaction with the human ACE2 receptor. The spike protein is a large type I transmembrane protein containing two subunits, S1 and S2. S1 mainly contains a receptor binding domain (RBD), which is responsible for recognizing the cell surface receptor. S2 contains basic elements needed for the membrane fusion. The S protein plays key parts in the induction of neutralizing-antibody and T-cell responses, as well as protective immunity. The main functions for the Spike protein are summarized as: Mediate receptor binding and membrane fusion; Defines the range of the hosts and specificity of the virus; Main component to bind with the neutralizing antibody; Key target for vaccine design; Can be transmitted between different hosts through gene recombination or mutation of the receptor binding domain (RBD), leading to a higher mortality rate.

Product Categories/Family for COVID-19 active protein

Virus related Protein

NCBI AND UNIPROT INFORMATION

Molecular Weight

51.5 kDa

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/hek293-cells-covid-19-active-protein/covid-19-spike-rbd-coronavirus/177997>